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"Scire est nescire, nisi id me
Scire alius sciret."

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POLIOMYELITIS IN BRISTOL, 1949

BY

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In 1947 I gave an account of the manner in which the poliomyelitis epidemic of that year, the first really serious epidemic seen in Great Britain, had affected Bristol.* The 1947 incidence of the disease was very light. But we were hardly hit in 1949. Since Ham Green Hospital admits the majority of cases occurring in the Bristol area our admission† figures should be a measure of the local incidence.

TABLE I
POLIOMYELITIS INCIDENCE

	1947		1948		1949	
Britain—Cases (*Lancet*, 1950)	7,766	*18*	1,859	*4*	5,800	*13*
Ham Green Hospital—Cases	23	*4*	29	*6*	125	*25*

Rate per 100,000 in italics

* *Jl.*, 1947, LXIV, p. 101.

† Other admissions, excluding transfers: Bristol Royal Infirmary, 12; Children's Hospital, 37; Southmead Hospital, 14.

City and County of Bristol: 130 cases, 85 males; 44 per cent. under 5 years, 33 per cent. 5–14 years. 5 deaths.

Casey (1946) and Hare (1949) believe that for every case with paralysis there are ninety-nine abortive infections. If we assume this is true also in Britain, and since the majority of our cases were paralytic, the numbers do not indicate the actual local prevalence of the infection. Indeed, the cases we are considering now are the unlucky people who developed the rather unusual complication of paralysis!

Cases admitted to Ham Green Hospital. Of 183 patients sent in as poliomyelitis the diagnosis was confirmed in 107. Eighteen other patients were found to be suffering from the disease although admitted under some other diagnosis. Among the 125 confirmed cases there were eight deaths, and eighteen abortive cases.

TABLE II

AGE AND SEVERITY

Males, 74 (6). Females, 51 (2)

Age	0–1	1–4	5–14	15–24	25 +	Total
Abortive ..	—	1	7	6	4	18
Slight ..	—	6	4	2	4	16
Moderate ..	2	21	19	8	5	55
Severe ..	2 (1)	9	10 (1)	8 (4)	7 (2)	36 (8)
	4 (1)	37	40 (1)	24 (4)	20*(2)	125

Deaths in parentheses. * Four over 35.

Diagnosis. There is little to add to the lengthy literature on diagnosis, and indeed seldom any difficulty is encountered in making a diagnosis in the presence of paralysis. A febrile illness with some meningeal signs followed by paralysis is the usual story of poliomyelitis. Occasionally the same picture can be noted as a result of Landry's paralysis or mumps encephalo-meningitis, and two cases of each of these conditions appeared among our cases originally thought to be poliomyelitis. Continued observation, careful history-taking and repeated examination of the cerebro-spinal fluid will usually show the true diagnosis.

While the diagnosis of the paralysed case might be easy, the same cannot be said for the non-paralytic variety. This diagnosis must always be a clinical presumption. Often the patient appears as suffering from meningitis; examination of the cerebro-spinal fluid suggests an encephalitis and sometimes the clinician is doubtful if the case is not tuberculous meningitis at an early stage. The considerable number of cases in this series sent to hospital with the wrong diagnosis is due to this difficulty in diagnosis of the non-paralytic disease. Nobody can say that such a case is not going to develop paralysis: indeed one of our cases remained quite ill in the preparalytic state for seventeen days and thereafter was severely paralysed. On the other hand, there are many conditions which can simulate non-paralytic poliomyelitis. Hence, in the diagnosis of this variety of the disease we regarded pleocytosis and increased protein in the cerebro-spinal fluid as necessary pointers towards a diagnosis. It might be said that abortive poliomyelitis may not evoke a cerebro-spinal fluid response; this is quite possibly true, since three of our *paralysed* cases showed no such response throughout the illness. However, in deciding on such an evasive diagnosis and in absence of any method of demonstrating the virus, one must start on some sort of firm ground. Then, having eliminated the presence of increasing blood antibody titres against chorio-meningitis, leptospirosis, mumps, mononucleosis, ornithosis-lymphogranuloma and Q fever, we observed the case and finally, in default, called it abortive infantile paralysis. The lack of a positive method of diagnosis of these cases is unfortunate.

The differential diagnosis of poliomyelitis, as evidenced by the true nature of the disease in the seventy-six patients admitted with this diagnosis, covers a wide field and is further evidence of the concern that the nonparalytic case causes. Tonsillitis, with twenty-three cases, heads the list, other central nervous diseases eighteen cases, septicaemic conditions six cases, and for the rest, odd cases of osteomyelitis, arthritis, rheumatism, fibrositis, otitis media, pneumonia, migraine, hysteria, sunburn, puerperal sepsis, pyelitis, nephritis, constipation and diabetic coma.

The course of the illness is largely unpredictable; the duration and severity of the preparalytic stage varies within wide limits and these variations do not bear any recognizable relation to the

extent of any subsequent paralysis. When paretic signs developed, most commonly they were maximal at the onset, but seventeen cases continued to have spreading paralyses over a period of days; one indeed continued so for eight days. Generally speaking, paralysis ceased spreading when the temperature fell to normal. Thereafter each case went its own way; some with extensive initial paralysis cleared up rapidly; most showed an improvement during the first post-paralytic week and all had some improvement within a month. As with the onset, the clearance of paralysis did not bear distinct relation to the severity of the illness or the extent of the initial paralysis. The distribution of the paralysis seemed to be an accidental phenomenon in this series and, although close interest was displayed, any connection with exercise was not well displayed. Indeed sixteen of the severely paralysed cases had led particularly restrained lives previous to infection. One of these was an advanced case of pulmonary tuberculosis in our own sanatorium. Two other local patients, previously long immobilized in plaster beds, developed severe paralysis (personal communication).

There were five instances of two cases occurring in the same household and one instance of three simultaneous cases, all with paralysis.

The Deaths. The death rate of our cases is relatively low. All those who died had severe paralysis and four of them died of steadily progressive paresis. Two patients died exceedingly suddenly of cardiac failure; they had had no respiratory paresis although other paralysis was widespread. One patient died as a result of pharyngeal paralysis; he was in the artificial respirator and all efforts to keep his air passages dry were of no avail. The last patient had a sudden cardiac failure while in the respirator.

Treatment. Treatment was symptomatic and anxiously expectant during the acute phase. It was found that hot packs relieved the pain of spasm and that pethedine induced comfort and sleep. Initially the limbs were composed in easy extension with a foot board to prevent foot drop. Within the first week of the post-paralytic period physiotherapy was commenced and thereafter all cases have continued under orthopaedic care.

Many of them were actually transferred to an orthopaedic hospital. At first, these transfers were carried out after the patients had been isolated for four weeks—an arbitary figure which was increased to six weeks when two cases developed in the orthopaedic hospital and might have been infected by our transfers. Horstmann (1946) has demonstrated that the virus can be recovered from the faeces for a period of up to two months, although 50 per cent. of cases are clear in less than four weeks from the onset of symptoms.

The mechanical respirator can be a life-saver and was undoubtedly so in several of our cases. The use of this apparatus must be anticipated and it was found very important that the patient be conditioned psychologically in advance if possible. Being stuck into an "iron lung" without warning is a severe shock to most people. The respirator was used as soon as there was evidence of respiratory distress, not waiting until distress had become gross. Discontinuation of the respirator should be as early as is feasible but it should be cautious in order to allow for fatigue in recovering musculature. The respirator is a very specialized instrument and it requires competent supervision by attendants well skilled in its use: constant mechanical care pays good dividends in efficient, trouble-free operation.

In all, seventeen patients made use of the respirator including six of those who died. One small boy required assisted respiration for nearly eight weeks. No patients have needed permanent assistance. At the peak of the epidemic we had four mechanical respirators operating simultaneously.

Nobody can write about anterior poliomyelitis without realizing the considerable gaps in our knowledge concerning this disease. These blind spots occur at crucial points in the progress of the disease rendering us helpless to control or cure at the present time. The etiological agent has been long proved and the family tree of the strains of this virus is receiving a great deal of attention: recently Dalldrof *et alii* have extended the family in discovering the Coxsackie virus : Morgan *et alii* have demonstrated

the specificity of immunological response to the various strains of the virus. The organism is transmitted and can be recovered from the faeces or, less commonly, the upper respiratory passages (Toomey (1935), Paul (1938), Bodian (1941)). In this country the clinician gets little help from these developments and, even if he was able to culture the organism, the methods are slow and the results would be retrospective. Active immunity cannot be applied, but if it could be developed by a polyvalent antigen, it might yet control this disease. Physical methods of diagnosis are not accurate and, of course, in this disease the developed illness may always be uninfluenced by treatment, since the crux of the illness is what nerve cells, and how many, have been killed by the infection.

Dead nerve cells will always mean paralysis and, therefore, positive treatment at this stage is impossible. We do not know why the virus prefers to attack motor neurons and we are puzzled why the age incidence is rising in most parts of the world. Little or nothing is known of the factors which decide whether an infection with the virus will result in paralysis or not. We find hope in the very high minor infection rate and are reduced to suggesting that the virus does not really mean to paralyse at all. Yet these unlucky persons who are paralysed increase in numbers every year. Van Riper reports more than 41,500 stricken in the U.S.A. during 1949 and in all probability quite eighty of our small series will carry evidence of morbidity all their lives. While in this hospital, the 1949 cases of poliomyelitis cost us £6,615 and this is only the beginning of the national economic and human loss.

One last problem is the connection between poliomyelitis and the weather. Undoubtedly the summers of 1947 and 1949 were exceptionally fine for Britain and we had plenty of poliomyelitis in each of these summers. This year " as everybody knew would happen "—*Lancet* (1949), the disease fell with the coming of cold weather. Adamson *et alii* however, report severe outbreaks of poliomyelitis among Eskimos in temperatures as low as 81°F, of frost. As a matter of interest, the mean weekly temperatures in Bristol during 1949 are graphed against the weekly admissions of poliomyelitis cases to Ham Green Hospital during the same period.

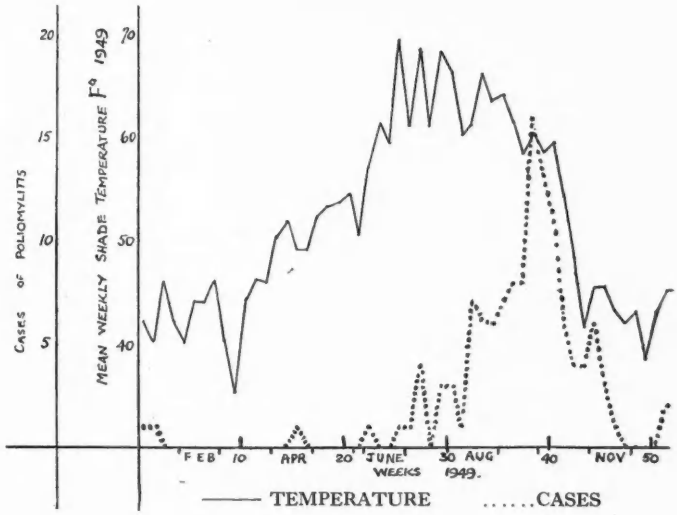

FIGURE 1.

My thanks are due to H. H. Harding, F. R. Met. Soc., Bristol, for the temperature readings recorded in Fig. I

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EPIDEMIC MYALGIA—BORNHOLM DISEASE

BY

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Daae first described an epidemic of this disease in Norway in 1872. In 1933 Sylvest published an account of a large epidemic on Bornholm, an island in the Baltic.

Etiology. The infecting agent is unknown. In 1924 Small reported that he had found a protozoan organism in the erythrocytes of his patients, but other workers have failed to confirm this. Attlee *et al.* suggested that a streptococcus, which they had isolated from the throats of their patients, was responsible. de Rudder in analysing the epidemiological data of poliomyelitis and epidemic myalgia was impressed by the similarity of the two diseases and he suggested that the latter was a variant of poliomyelitis.

The disease chiefly affects young people under thirty years of age. The sexes are equally affected. Pickles, working in the favourable conditions of Wensleydale, considered that the incubation was four days, but others have observed longer periods, e.g. ten to fourteen days. (Crone and Chapman, Rector.) Epidemics usually occur in summer and autumn.

General Characteristics. There is an abrupt onset of severe pain usually in the chest or abdomen, but other areas may be affected. Smith (1937) has described a cervical type. The temperature is usually moderately raised though the milder cases may be afebrile. In young children the respiration is rapid (Pickles 1949). Headache is common, but vomiting, cough and diarrhoea are unusual. The symptoms frequently clear up in forty-eight hours, but relapse is very common and some cases take three to four weeks to recover completely.

In the thoracic type a pleural rub has been described in a number of cases (Williamson; Attlee *et al.*). Neurological symptoms have been recorded. Howard *et al.* in an epidemic of 161 cases had five instances of meningitis and three of meningo-encephalitis. McConnell described a case with generalized headache, photophobia and neck rigidity. The C.S.F. contained 20 cells and 60 mgm. of protein.

Fifteen cases occurred at Clifton College in the Autumn of 1949. On September 29th a boy of seventeen complained of the sudden onset of pain in the upper abdomen; with each breath it became severe and was associated with pain just below both clavicles. The whole upper abdomen was tender and pressure in this region produced the infra-clavicular pain. He was afrebrile, there was no cough and his appetite was good. The next day he had practically no symptoms, but on the fourth day his temperature rose to 101 deg. and he had severe pain in the right hypochrondrium and right infra-clavicular region. A coarse rub was heard over the lower ribs anteriorly and crepitus could be felt when the right hypochondrium was palpated. The pain rapidly improved, but it was present to some extent for three weeks. On the fourteenth day of the illness an X-ray of the chest showed no abnormality.

On October 1st a boy of eighteen complained of pain in the same distribution as in the first case, and on October 3rd a third similar case was seen. The subsequent cases commenced on the following dates: October 23rd, one; October 24th, two; October 26th, two; October 27th, one; October 28th, three; and November 3rd, three. In five of these cases the pain was entirely abdominal, accentuated by movement and inspiration. There was marked localized tenderness in the lower abdomen. In one case there was nausea, but no other gastro-intestinal symptoms were observed. The pain in these cases lasted five to seven days. During this period a number of boys were seen with less severe pains in the arms, legs and neck. No neurological symptoms were observed.

About this time seven cases were admitted to a Bristol hospital as emergencies: *

Case 1.—Female, seventeen years. Pain in right hypochondrium.

Case 2.—Male, twenty-eight years. Pain right abdomen and shoulder.

Case 3.—Male, eight years. Pain in abdomen and chest.

Case 4.—Female, thirty-eight years. Pain in the right hypochondrium with a friction rub.

Case 5.—Male, thirty-four years. Pain in the righthy pochondrium and shoulder.

Case 6.—Female, ten years. Pain in chest.

Case 7.—Female, forty-three years. Pain in the right chest with a pleural rub.

Diagnosis. In cases in which the pain is abdominal diagnosis has to be made from perforated gastric or duodenal ulcer, acute appendicitis and acute cholecystitis. Myalgia rarely produces any gastric or intestinal symptoms other than pain: this is not of an intermittent colicky character. Nausea and vomiting are rare. When the pain is principally in the chest and especially if there is a friction rub, it may be impossible to exclude pleurisy for a few days: pleural effusion has not been reported and there are no moist sounds in the lungs. In older people coronary thrombosis may be suggested by the area and severity of the pain. Treatment is symptomatic.

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* I am indebted to Mr. J. M. Naish for this information.

PLATE IV

GASTRIC ULCER
WITH PERFORATION INTO THE LESSER SAC

The ulcer crater seen above communicates with cavity shewn in Plate V.

PLATE V

GASTRIC ULCER
WITH PERFORATION INTO THE LESSER SAC

Large cavity to right of spine containing Barium and gas.

GASTRIC ULCER WITH PERFORATION INTO THE LESSER SAC:

Report of a case

BY

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This case is considered to be of interest from the point of view of the length of history, the long latent period between the first symptoms and the onset of the acute phase, and the unusual size of the Haudec diverticulum which can be seen in the X-rays, with no history suggestive of an acute perforation at any time.

Mrs. L., aged sixty-seven, was admitted to Hospital complaining of severe epigastric pains and vomiting after all her meals. Her history was as follows:

She had upper abdominal pain associated with vomiting on and off throughout the 1914–18 war, which was put down to indigestion and treated with medicines. She was then free from pain until August 1949, when she started to have severe pain in the left of the epigastrium coming on half an hour after a meal, and being relieved slightly by medicines. The pain was the same type that she had previously experienced, though more severe in character. She was vomiting frequently and her general condition was poor.

Soon after admission she had a slight haematemesis and was put on a first stage ulcer diet—small feeds of citrated milk every two hours. Apart from epigastric tenderness there was no abnormality detected on physical examination. X-ray report: " There is a very large perforating ulcer halfway down the lesser curvature of a dilated and ptosed stomach, Plate IV ; this apparently communicates with a cavity on the right side of the third lumbar vertebra which contains barium fluid and gas. The stomach is greatly dilated with much spasm of the pylorus." Plate V.

She was on dietetic treatment for twelve days and then had two small haematemeses followed by a severe one, and became rather collapsed. She was transfused after the severe haematemesis and was operated upon when her haemoglobin had risen to 78 per cent. It was found at operation that there was a large simple gastric ulcer with a stoma about an inch in diameter and adherent to the pancreas, leading into a false diverticulum which lay in the lesser sac. A sub-total gastrectomy was performed and the ulcer was sent for microscopical examination. The report stated that " sections show a chronic peptic ulcer with replacement of the mucous membrane by granulation tissue and underlying fibrosis. There is no evidence of malignancy."

The patient made an uneventful recovery and has remained well since. She was seen a few days ago and was enjoying her food and having no pain.

CONGENITAL ATRESIA OF THE OESOPHAGUS

Reports of three cases

BY

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This condition is not rare, but until recently has been almost invariably fatal. The condition is now curable, but early diagnosis is essential, and surgical correction of the abnormality must be performed within the first two or three days of birth. The diagnosis should always be suspected if the following signs are present: frothy mucus about the nose and mouth; cyanosis during feeds, and regurgitation; abdominal distention on screaming. The obstruction can always be felt on passing an adult size rubber catheter into the upper oesophagus.

The abnormality most frequently encountered consists of absence of the upper third of the thoracic oesophagus; the cervical oesophagus ends blindly, and the lower part of the oesophagus communicates with the trachea at the bifurcation. Cases 1 and 2, described below, belong to this category. The cases were shown at the Clinical Meeting of the Society on November 9th. Other abnormalities have been described, sometimes in combination, but are rare, e.g.

(*a*) Complete absence of whole oesophagus.

(*b*) The oesophagus is a solid cord.

(*c*) A normal oesophagus is separated from the pharynx by a mere web.

The variation found in Case 3 is extremely rare.

Case 1. Baby O. was admitted to the Thoracic Unit on December 18th, 1948, at the age of two days. Birth weight 7 lb. 12 oz. There was continual discharge of mucus from mouth and nose since birth; difficulty in taking feeds, and distressed breathing; one attack of cyanosis: general condition fair: both lungs wet. The abdomen became distended on screaming. X-ray examination after injection of lipiodol into the upper oesophagus through a catheter revealed complete oesophageal atresia at the level of the first rib: the intestines were seen to be distended with air, revealing presence of a tracheo-oesophageal fistula.

Operation performed on day of admission: right transpleural thoracotomy, with closure of tracheo-oesophageal fistula and end-to-end anastomosis of the upper and lower oesophageal segments; convalescence uneventful; feeding by mouth commenced thirty-six hours after operation.

Barium swallow six weeks after operation shows a perfectly functioning anastomosis and a well developed lower oesophageal segment. The child has remained well ever since, is now thirteen months old and feeding and developing normally.

Case 2. Andrew B. was admitted to the Thoracic Unit on October 10th, 1949, at the age of three days: full term, normal delivery, birth weight 8½ lb. Since birth there had been regurgitation of feeds with cyanotic attacks; and discharge of mucus from mouth and nose between feeds: moist sounds in both lungs, general condition fairly good. One previous child had died of congenital heart disease at the age of two years. X-ray of chest revealed collapse of the right upper lobe. Injection of lipiodol into the upper oesophagus through a rubber catheter showed complete atresia of the oesophagus at the level of the second rib, and intestines distended with gas.

Operation was performed on same day: right transpleural thoracotomy, with closure of tracheo-oesophageal fistula, and end-to-end anastomosis between the upper and lower oesophageal segments. The operation was difficult owing to shortness of the upper segment : the lower segment was very narrow and under-developed. Convalescence uneventful: feeding by mouth twenty-four hours after operation. Barium swallow ten weeks after operation showed a perfectly functioning anastomosis and considerable development of the lower oesophageal segment: child now well and feeding normally.

Case 3. Robert B. was admitted to the Thoracic Unit on September 28th, 1949, at the age of two days. He had been born in Southmead Obstetric Unit; five weeks premature, birth weight 5 lb., hydramnios present. No feeds were given first day, but a lot of mucus was present in the naso-pharynx. On the second day two feeds were given and both returned immediately; the baby became very cyanosed after the second feed: moist sounds present in both lungs, abdomen not distended, general condition poor. Under X-rays lipiodol injected through a catheter into the upper oesophagus revealed complete atresia at the level of the first rib: no gas present in the intestines.

Operation was performed on day of admission—Right transpleural thoracotomy. No tracheo-oesophageal fistula was present and the lower oesophageal segment extended only one inch above the diaphragm: the upper segment extended down to the azygos vein. The lower segment was replaced in the abdomen and the chest closed. The upper segment was then brought up to the surface and a cervical oesophagostomy performed. The lower oesophageal segment was next brought out on to the abdominal wall to form a gastrostomy: convalescence uneventful. The child is now five months' old and developing normally; there is a continual discharge of saliva from the oesophagostomy. At a later date the stomach will be brought up through the left side of the chest and a cervical oesophago-gastrostomy performed.

SOME RECENT ADVANCES IN PAEDIATRICS*

BY

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The first condition I want to mention is concerned with "milk dryness". This occurs in primiparae who at the commencement of lactation seem to have an adequate supply of milk which dries up after two or three weeks. It has been found that this is due to the fact that the baby does not empty the breast completely at each meal, so that a residue of milk is left: and this, accumulating and causing pressure in the breast acini, brings about the cessation of milk secretion. This condition can be overcome by teaching the mothers to empty the breasts themselves by manual manipulation after feeding. At the British Hospital for Mothers and Babies at Woolwich this excess milk forms the nucleus of the milk bank which has proved so useful in supplying human milk when required for premature babies both at this and other hospitals.

Next let us turn our attention to the importance of neonatal sepsis. It has to be remembered that the new-born has not had time to attain any real resistance to infection. Even the mildest degree of infection such as a sticky umbilicus or gummy eyes is likely to prove dangerous and may well lead to septicaemia. The picture of sepsis in the new-born is quite unlike that in the adult: the condition should be suspected if the child vomits after its feeds, shows a low and diminishing temperature and ultimately goes off its feeds and starts having convulsions. The cause of these symptoms is often mistaken for a digestive condition rather than infection and so the diet is modified in various ways. In actual fact however the trouble is probably septic rather than

* From an address delivered to the Torquay & District Medical Society on Thursday, March 9th, 1950.

dietetic. The treatment in this case is to give penicillin at once in adequate doses—up to 10,000 units per pound—until the infant recovers. This dosage could be given orally but is more efficient when given by injection.

The next condition to be considered is pyloric stenosis. Here it is essential to withhold eumydrin until the diagnosis has been quite definitely established. Another cause of vomiting in infants is a condition which has only recently been recognized and is known as lax cardia. This is due to a developmental error resulting in a " short oesophagus " so that there is no sphincter reaction at the cardia. Consequently, when the infant is put down after feeding the meal regurgitates up the oesophagus. As a result ulceration and erosion of the oesophagus will take place and after a time the vomit will contain specks of blood, which will distinguish the condition from vomiting due to pyloric stenosis. The treatment for this condition is to keep the infant in an upright posture after every meal and to give it alkalis at the conclusion of the feed.

Vomiting and choking which take place during feeding may be due to immaturity of the neuro-muscular mechanism of the pharynx and larynx. This is a condition occurring in the very young and must be distinguished from vomiting and choking due to atresia of the oesophagus. Examination under the X-ray screen following administration of a teaspoonful of opaque oil will settle the diagnosis. It may be necessary to feed the child by means of a tube until the reflexes of the pharynx are fully established.

Steatorrhoea. One of the more recently recognized causes for this lesion is fibrocystic disease of the pancreas. It is a familial condition and is the result of obstruction of the pancreatic ducts by viscid mucus. The pancreatic secretion is thus damned back, so that the meconium is not digested and becomes almost rubber-like, leading to meconium ileus and obstruction. At this latter stage the condition is a surgical problem. Children affected with this condition are difficult to nourish and do not put on weight. Their stools are most offensive; they are particularly prone to suppurative infections of the chest. The familial aspect of the disease is often evident from the mother's story; she may have had one baby which died from intestinal obstruction and others

from pneumonia. If the condition is suspected it can be confirmed by passing a duodenal tube under X-ray control and withdrawing duodenal secretion: it will be found in such cases that pancreatic trypsin is absent. Coeliac disease is another form of steatorrhoea : this disease differs from the last type of steatorrhoea in that it usually comes on between the ages of six months and two years. It is probably not due primarily to inability to digest fat (as was previously supposed) but to inability to cope with starch, and the distention found in this disease is due to starch fermentation. It has now been established that if children are put on a starch-free diet (soya-meal biscuits are of great assistance) and given up to 50 grammes of fat a day they improve very rapidly and after a time become normal.

Hirschsprung's Disease. It has now been found that in this condition the hypertrophic colon is in fact secondary to the rectum being unable to receive the contents of the colon and it is the rectum which is at fault. Treatment is surgical. After a colostomy, the rectum is excised leaving the anal sphincter, and the pelvic colon is brought down and attached to the inner margin of the anus. These cases do well with this procedure.

About B.C.G. inoculation: it takes an infant six to ten weeks to develop resistance as a result of inoculation : and meanwhile any risk of the child being infected with the tubercle bacillus must be guarded against. Therefore it is advisable that the child should be kept in a tubercle-free atmosphere for a period of at least six weeks both before it is inoculated and afterwards.

Reviews of Books

Stillbirths. By IAN SUTHERLAND, D.Phil., F.S.S. Pp. xii, 93. London: Oxford University Press (Geoffrey Cumberlege). 1949. Price 7s. 6d.—This little book deals with a subject which has until comparatively recently received but scant attention. The author sets out to draw attention to the potential wastage which occurs in the first year of life and continues to examine the several causes, medical and social, which may have a bearing on this problem. The facts, carefully collected and sifted, are set out with an unbiased opinion. The style is easy, the tables and figures clear, and the statistical approach should not be beyond the limits of the average reader. There follows a summary, full list of references and an adequate index. So small a volume could be read by all including the more serious-minded final-year student, though the book will appeal most to research workers in this field and to those who are in daily contact with the problem of stillbirths and neo-natal deaths.

Materia Medica and Pharmacy. By R. R. BENNETT, B.Sc., F.R.I.C. Fifth Edition. Pp. xxviii, 276. London: H. K. Lewis & Co. Ltd. 1950. Price 16s.—This little book contains essentially a concise account of the "drugs, chemicals and preparations" of the *British Pharmacopoeia*, 1948. For each drug the chemical formula, source and official dose are given and the therapeutic use is outlined in a sentence or two. The book includes a short glossary of pharmaceutical terms, tables of weights and measures, of metric and imperial "equivalents", and of doses arranged alphabetically. A concisely and clearly written account of incompatibility forms an appendix. The book should be a very useful adjunct to the standard textbooks of pharmacology. Compared with the *B.P.* it has the advantage that a drug and its official preparations are mentioned together. One criticism may be ventured: the drugs are grouped according to their pharmacological action, but the grouping differs from that found in those textbooks of pharmacology which are commonly used by medical students. It may be suggested that for the sake of uniformity and easier reference the author employs a more customary method of grouping in a following edition.

The Middlesex Hospital, 1745-1948. By HILARY ST. GEORGE SAUNDERS. Pp. 100. Illustrated. London: Max Parish & Co. Ltd. 1950. Price 8s. 6d.—This short work which can be read in a night covers the story of a great teaching hospital over two hundred years. It will appeal chiefly to the layman, for whom it is obviously written, and to the

ex-Middlesex man, who will find much that is nostalgic in the illustrations and in the well-written text. Every doctor will, however, find some interest in the book, since the story is one of the progress of medicine in a voluntary hospital. " The walls of a great institution are also built of living stones, the men and women who work there and whose corporate labour makes its reputation." The " men and women " include not only the medical and nursing staff, but a vast host of ancillary workers. No branch of hospital life and work has been forgotten from the surgeons and physicians to the kitchen staff. The nursing staff is given a justly prominent place in the picture. The layout of the book is attractive and easy to follow; the absence of an index is the only defect.

Isotopic Tracers and Nuclear Radiations, with Applications to Biology and Medicine. By W. E. Siri. Pp. xiii, 653. Illustrated. New York: McGraw-Hill Book Company Inc. 1949. Price 106s. 6d.— This book is primarily intended for the physicist " to bridge the gap between those books intended solely for the nuclear physicist and those which merely describe the results of research in which radioactive isotopes and nuclear radiations were used ". There is a serious need for a really good work dealing with the general principles of the application of tracers to biological research. Dr. Siri's book is divided into three parts. The first covering almost half the book is concerned with the physics of isotopes and nuclear radiations—the properties of nuclei, gamma-rays, beta particles, " heavy " charged particles and neutrons—each illustrated with useful tables and graphs. Short chapters on fission and radioactivity conclude with a complete reproduction of the comprehensive Seaborg & Perlman table of isotopes. The second part on methods and instruments describes the estimation of stable and of radioactive isotopes, the theory and design of the mass spectrograph, of Geiger Muller counters and ionization chambers and the standardization of radioactive samples. The book unfortunately includes no reference to the most recent use of scintillation counting. A brief review of the theory of tracer methods, the principles of internal dosimetry, ashing techniques, and the safe handling of radioactive materials, will be useful to the biologist. The third part, entitled " Biological and Medical Applications of Isotopes," written by Ellsworth C. Dougherty is mainly devoted to a really excellent bibliography. It gives nearly 1,800 references, classified under the element concerned. Dr. Siri and his collaborators are to be congratulated on producing a very useful work of reference. The book is well arranged and ease of reference is an outstanding quality: the index is perhaps the weakest feature of the book and little more useful than the table of contents at the beginning.

Meetings of Societies

British Medical Guild

A meeting to which all members of the profession in Bristol were invited was held at the University on February 15th, 1950, with the object of setting up the local organization of The British Medical Guild. After electing Dr. T. Milling as chairman, the meeting considered the composition of the area committee and decided it should consist of sixteen members. These will be representative of all branches of the profession by having:

Three nominated by the Executive Committee of the Bristol Division of the B.M.A.

Three nominated by the Local Medical Committee.

Three nominated by the Local Consultants' and Specialists' Committee.

One representative of the Public Health members of the area.

Six elected by the meeting, being representative of the local profession.

The following were then elected to fill these places: Drs. B. E. McConnell, H. K. V. Soltau, R. P. Warin, Winifred Nott, J. A. Birrell and W. H. Hayes.

When fully constituted the Committee will meet and elect its officers. Meanwhile, any further information may be obtained from Dr. W. H. Hayes or Dr. H. M. Golding, 10 Barton Hill Road, Bristol 5.

Devon and Exeter Medico-Chirurgical Society

Clinical Meeting, Thursday, January 5th.

Dr. Gipson and Dr. Daly: **"Diaphragmatic Hernia".**

Mr. Gairdner: **"Five Cases of Carcinoma of the Bladder".**

Dr. Shave and Dr. Seward: **"Chronic Nephritis".**

Dr. Daly: **"Malignant Hypertension".**

At a Clinico-Pathological meeting on March 16th, 1950, Dr. N. S. Alcock presented an unusual case of Hodgkin's disease with lesions confined to the suprarenals, meninges, cord and brain; Mr. F. C. Durbin a case of chondroma of the os calcis following an injury to the heel; Mr. P. G. Scott, Drs. A. V. Daly and Alcock two cases of intracranial abscess, one cerebral, the other cerebellar. The pathological aspects of all four cases, which evoked much lively questioning and comment, were presented by Dr. G. Stewart Smith. The chair was taken by the President of the Society, Dr. Charles Wroth.

BRISTOL MEDICO-CHIRURGICAL SOCIETY

INCOME AND EXPENDITURE ACCOUNT for the year ended 30th September, 1949

EXPENDITURE

	£	s.	d.
To Subscriptions to *Medico-Chir. Journal*	380	0	0
,, Grant to Medical Library	25	0	0
,, Librarian, Honorarium	15	0	0
,, Secretary, Honorarium	10	0	0
,, Audit Fee	8	8	0
,, Printing and Stationery*	88	14	2
,, Lewis's Medical and Scientific Library	6	18	5
,, Catering	104	15	0
,, Other Expenses *re* Meetings	15	1	2
,, Postages and Sundries	18	4	1
	*£672	0	10

INCOME

	£	s.	d.
By Members Subscriptions	599	0	6
,, Interest on Bank Deposit Account	14	2	
,, Interest on £500 4 per cent. Consol. Stock, *less* Tax	11	0	0
,, Deficiency for the Year*	61	6	2
	*£672	0	10

BALANCE SHEET as at 30th September, 1949

LIABILITIES

	£	s.	d.
Sundry Creditors	107	14	0
Subscriptions paid in advance	7	18	6
Cash due to the *Journal**	202	0	0
Accumulated Fund as at 30th September, 1948 (£ s. d. 594 2 4)			
Less Deficiency for the year* (61 6 2)			
	532	16	2
	£850	8	8

ASSETS

	£	d.	s.	£	s.	d.
Cash at Bank:						
Current Account	47	9	6			
Deposit Account	92	2	8			
				139	12	2
Petty Cash in Hand				2	18	0
£500 4 per cent. Consol. Stock at Cost				437	9	0
Arrears of Subscriptions				270	9	6
				£850	8	8

Audited and found correct.
C. J. RYLAND & CO.

* These amounts should be reduced by £22 17s. 10d. : miscellaneous printing expenses to this amount, due by the *Journal*, were paid from the Society's account, The sum is included in the £261 2s. 4d. shewn as "Paid to Arrowsmith" in the *Journal* balance-sheet.

EXPENDITURE

	£ s. d.	£ s. d.
Arrowsmith, Printing:		
January, 1949	102 19 11	
April	112 12 4	
July	97 8 8	
October (estimate)	152 11 4	
		£465 12 3
1948:		
Autumn	56 0 7	
Winter ..	54 8 5	
	110 9 0	
Estimates:		
Autumn	60 7 4	
Winter ..	50 0 0	
	110 7 4	
Add for 1948 excess over estimate ..		1 8
Total		465 13 11
Postages and Sundries		4 0
Audit Fee		3 3 0
		469 0 11
Surplus for year		174 14 4
		£643 15 3

RECEIPTS

	£ s. d.	£ s. d.
Subscriptions:		
Members of Bristol M.-Chir. Soc.		380 0 0
,, Torquay M.-Chir. Soc.		15 10 0
Non-members		44 14 6
		440 4 6
Advertisements:		
January	50 7 0	
April	53 3 9	
July	51 0 6	
October (est.) ..	48 19 6	
	203 10 9	
		£643 15 3

LIABILITIES

	£ s. d.	£ s. d.
Creditors: Arrowsmith:		
September, 1948	371 9 8	
,, 1949 ..	465 13 11	
	837 3 7	
Deduct:	£ s. d.	
Paid, 1948	261 2 4	
Adverts	203 10 9	
	464 13 1	
		372 10 6
Auditors		3 3 0
		£375 13 6

ASSETS

	£ s. d.	£ s. d.
Cash at Bank		101 8 11
,, due from Soc. (inc. in £380 above)		179 2 2
Deficit, Sept., 1948	£269 16 9	
Less Surplus for year ..	174 14 4	
		95 2 5
		£375 13 6

Torquay and District Medical Society

A meeting was held at the Torbay Hospital on Thursday, March 9th, 1950, and a large body of local General Practitioners were addressed by Dr. Wilfrid Sheldon on **"Some Recent Advances in Paediatrics"**. (P. 56.)

British Medical Association

Bath, Bristol and Somerset Branch

Wednesday, February 22nd, 1950, at the Royal United Hospital, Bath. Professor Robert Cruickshank on **"The Family Doctor as an Epidemiologist"**.

Thursday, March 9th, 1950, at the Musgrove Park Hospital, Taunton. Dr. C. R. Gibson on **"Venus, Bacchus and Crime"**.

British Medical Association

Bristol Division

Wednesday, February 15th, 1950. General Meeting of the Division in the Main Physics Lecture Theatre, University of Bristol.

Local Medical Notes

The XXXIX Long Fox Memorial Lecture will be delivered at 8.30 p.m. on November 14th, 1950, by Dr. J. Maurice Campbell, O.B.E., D.M., F.R.C.P. Subject to be announced later.

Southmead Hospital, Bristol. The Out-patient Department is now open: patients can be seen only on the recommendation of the family doctor, and by appointment. Applications should be addressed to the Appointments Officer.

The Sin of Ham. Bristol General Hospital is being cleaned: the removal of the grime of fifty years reveals some of the buildings as they first appeared. The result is less gratifying than was expected—indeed, anticipated.

Appointments

Dr. A. H. Gale, Director of Medical Postgraduate Studies, University of Bristol.

Dr. J. E. Krzywiec, Assistant Medical Officer of Health, Bristol.

W. Rutherford Black, M.B., Ch.B., F.R.C.S.—Consulting Surgeon to Weston-super-Mare Hospital.

R. A. Craig, M.D., M.R.C.P.—Consulting Chest Physician in Bristol Clinical Area.

Kenneth W. B. Rostron, M.B., B.Ch., D.O.M.S.—Consultant Ophthalmic Surgeon in West Cornwall Clinical Area.

Degrees and Diplomas

University of Bristol.—

M.D.—G. S. Andrews, F. G. Robinson.

M.B., Ch.B.—*Second Examination.*—D. L. Archer, G. A. J. Aycliffe, P. B. Bailey, A. M. Bain, J. A. Beel, M. J. Betty, J. P. Bishop, G. A. Bond, Christine F. Boulter, D. F. Brittain, T. A. V. Brooks, J. G. Cook, A. J. Coppen, R. Crossley, K. D. Davies, P. W. E. Downes, R. D. Doyle, R. I. Eastwood, Dorcas Edwards, M. B. Gee, Ruth J. Grose,* Monica M. Gurnhill, Ruth L. Hickson, Winifred J. Hobbs, J. L. James, J. D. Jefferies, Erwine M. Lamming, A. J. Macdonald, Doreen E. McConnell, K. W. Moulding, A. E. Nesling, P. O. Nicholas, D. G. Osmond, H. Price, J. Roylance, Beryl M. Shipton, W. B. Spry, Audrey B. Stevenson, Margaret G. Taylor, D. G. Trott, J. W. Ware,* A. J. Webb,* R. Winstone.

* With distinction in Anatomy.

UNIVERSITY OF BRISTOL

Faculty of Medicine

The University grants the Degrees of Bachelor of Medicine and Surgery (M.B., Ch.B.), Master of Surgery (Ch.M.), Doctor of Medicine (M.D.), Bachelor of Dental Surgery (B.D.S.), and Master of Dental Surgery (M.D.S.), Bachelor of Veterinary Science (B.V.Sc.), as well as diplomas in Public Health (D.P.H.), in Psychological Medicine (D.P.M.), in Medical Radiodiagnosis (D.M.R.D.), Medical Radiotherapy (D.M.R.T.), and Dental Surgery (L.D.S.), and a Certificate in Public Health.

Clinical instruction is provided in the Bristol Royal Hospital, the Bristol Eye Hospital, the Children's Hospital and in some of the Hospitals in the Bristol area under the control of the South Western Regional Hospital Board. Mechanical and clinical instruction in Dentistry is carried out in the University's Dental Hospital and School.

Women are admitted to all Classes, Lectures, and Laboratory Practice, and attend them with men.

Inclusive fees.

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For the B.D.S. curriculum	£290	16	0
For the L.D.S. curriculum	£270	2	0
For the B.V.Sc. curriculum	£253	15	6

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The University, Bristol 8.